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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,273	01/30/2006	Atsuo Okaichi	050868	1681
23850 7590 07/18/2008 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005				
EXAMINER				
MYERS, JESSICA L				
ART UNIT		PAPER NUMBER		
3746				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,273

Applicant(s)

OKAICHI ET AL.

Examiner

JESSICA L. MYERS

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 12/19/07, 1/30/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

qDETAILED ACTION

Drawings

1. Figures 11, 12, and 13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 9, 10, 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,494,412 to Shin (Shin).

In Reference to Claim 1

Shin teaches a compressor (see figure 3) comprising a container (casing (1)), a compressor mechanism (compressing unit (C)) which is provided in said container for

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compressing working fluid (a refrigerant gas), a motor (drive unit (D)) which is provided in said container for driving said compressor mechanism, and an oil reservoir which is provided at a bottom of said container for storing refrigeration oil (unnumbered oil reservoir at the bottom of casing (1), see column 1 lines 20-21), wherein a wave-suppressing member (oil separating nets (20, 30, and 40) serve to suppress any pulses or waves of the mixed gas leaving the rotor of the compressor) is provided in an interface between the working fluid and the refrigeration oil of said reservoir (The oil separating nets (20, 30, and 40) also serve to separate the oil-refrigerant mixture leaving the compressor from a pure refrigerant gas which enters into a delivery pipe (10a), see column 5 lines 5-14. Thus the separating nets serve as an interface that separates the oil from the refrigerant.).

In Reference to Claim 2

Shin teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein said wave-suppressing member comprises a divided member which extends astride said interface to divide said interface into a plurality of pieces (each separating net (20, 30, 40) serves as a divider arranged along the oil-refrigerant interface, and the separating nets are arranged in such a manner that they divide the interface into several spaces (S4 and S5)).

In Reference to Claim 3

Shin teaches the compressor according to claim 2 (see the rejection of claim 2 above), wherein said divided member comprises a plurality of plates standing in the vertical direction (Each vertically arranged net (20, 30, 40) has an associated shielding

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plate (21, 31, 41) that is also arranged in the vertical direction, see figures 4a, 4b, and 4c).

In Reference to Claim 4

Shin teaches the compressor according to claim 3 (see the rejection of claim 3 above), wherein a plurality of said plates are assembled in a lattice form (Each shielding plate (21, 31, 41) is assembled either inside or outside an associated net part (22, 32, 42), and each net part is formed from interwoven or latticed components).

In Reference to Claim 5

Shin teaches the compressor according to claim 2 (see the rejection of claim 2 above), wherein said divided member comprises a honeycomb member (Each shielding plate (21, 31, 41) is assembled either inside or outside an associated net part (22, 32, 42), and each net part is formed from components interwoven in a honeycomb-like shape).

In Reference to Claim 6

Shin teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein said wave-suppressing member comprises a porous member extending astride said interface (Each shielding plate (21, 31, 41) is assembled either inside or outside an associated net part (22, 32, 42), and each net part is formed from components interwoven with spaces or pores between them).

In Reference to Claim 7

Shin teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein said wave-suppressing member comprises a mesh member extending

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astride said interface (Each shielding plate (21, 31, 41) is assembled either inside or outside an associated net part (22, 32, 42), and each net part is formed from interwoven or meshed components).

In Reference to Claim 9

Shin teaches the compressor according to claim 2 (see the rejection of claim 2 above), wherein the mesh member is disposed in a divided portion divided by said divided member (Each shielding plate (21, 31, 41) is assembled either inside or outside an associated net part (22, 32, 42), and each net part is formed from interwoven or meshed components. The meshed net parts (22, 32, 42) are disposed either radially inside or radially outside of the shielding plates which serve as the dividing portion of the dividing member.).

In Reference to Claim 10

Shin teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein said wave-suppressing member comprises a plate member extending astride said interface (Each vertically arranged net (20, 30, 40) has an associated shielding plate (21, 31, 41) that is also arranged in the vertical direction, see figures 4a, 4b, and 4c).

In Reference to Claim 14

Shin teaches the compressor according to claim 3 (see the rejection of claim 3 above), wherein the mesh member is disposed in a divided portion divided by said divided member (Each shielding plate (21, 31, 41) is assembled either inside or outside an associated net part (22, 32, 42), and each net part is formed from interwoven or

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meshed components. The meshed net parts (22, 32, 42) are disposed either radially inside or radially outside of the shielding plates which serve as the dividing portion of the dividing member.).

In Reference to Claim 15

Shin teaches the compressor according to claim 4 (see the rejection of claim 4 above), wherein the mesh member is disposed in a divided portion divided by said divided member (Each shielding plate (21, 31, 41) is assembled either inside or outside an associated net part (22, 32, 42), and each net part is formed from interwoven or meshed components. The meshed net parts (22, 32, 42) are disposed either radially inside or radially outside of the shielding plates which serve as the dividing portion of the dividing member.).

In Reference to Claim 16

Shin teaches the compressor according to claim 5 (see the rejection of claim 5 above), wherein the mesh member is disposed in a divided portion divided by said divided member (Each shielding plate (21, 31, 41) is assembled either inside or outside an associated net part (22, 32, 42), and each net part is formed from interwoven or meshed components. The meshed net parts (22, 32, 42) are disposed either radially inside or radially outside of the shielding plates which serve as the dividing portion of the dividing member.).

4. Claims 1, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,176,506 to Siebel (Siebel).

In Reference to Claim 1

Siebel teaches a compressor (see figure 1) comprising a container (hermetic shell (10)), a compressor mechanism (scroll member (80)) which is provided in said container for compressing working fluid, a motor (including motor stator (32)) which is provided in said container for driving said compressor mechanism, and an oil reservoir which is provided at a bottom of said container for storing refrigeration oil (see the bottom of shell (10) in figure 1 and see also column 5 lines 15-18), wherein a wave-suppressing member (filter (170)) is provided in an interface between the working fluid and the refrigeration oil of said reservoir (the filter (170) separates a gaseous refrigerant from the oil contained in the bottom of the compressor, see column 6 lines 6-28, and would suppress waves formed in the oil reservoir).

In Reference to Claim 7

Siebel teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein said wave-suppressing member comprises a mesh member extending astride said interface (The filter (170) is a circularly shaped screen member that extends along the interface between the refrigerant and the oil, see figure 1).

In Reference to Claim 8

Siebel teaches the compressor according to claim 7 (see the rejection of claim 7 above), wherein said mesh member comprises a fibrous mesh member (The filter (170) is a circularly shaped screen member formed from interwoven fibers).

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5. Claims 1, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,167,719 to Yakumaru et al. (Yakumaru et al.).

In Reference to Claim 1

Yakumaru et al. teach a compressor (see figure 1) comprising a container (cylindrical shell (30)), a compressor mechanism (compressor mechanism (30)) which is provided in said container for compressing working fluid, a motor (motor mechanism (50)) which is provided in said container for driving said compressor mechanism, and an oil reservoir (oil reservoir (60A)) which is provided at a bottom of said container for storing refrigeration oil, wherein a wave-suppressing member is provided in an interface between the working fluid and the refrigeration oil of said reservoir (float (71) would suppress waves formed in the oil reservoir).

In Reference to Claim 11

Yakumaru et al. teach the compressor according to claim 1 (see the rejection of claim 1 above), wherein said wave-suppressing member comprises a floating type wave-suppressing member (see column 6 lines 35-50).

In Reference to Claim 12

Yakumaru et al. teach the compressor according to claim 1 (see the rejection of claim 1 above), wherein bulk density of said floating type wave-suppressing members is set greater than density of the working fluid and smaller than density of the refrigeration oil (since the float (71) is designed to float on the oil, but not on the refrigerant, it would necessarily be denser than the refrigerant, but less dense than the oil, see column 6 lines 35-50).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin in view of U.S. Patent 6,264,448 to Itoh et al. (Itoh et al.).

Shin teaches the compressor according to claim 1 (see the rejection of claim 1 above), but does not teach that the working fluid is carbon dioxide.

Itoh et al. teach a compressor that uses carbon dioxide as a working gas (see column 1 lines 15-30). It would have been obvious to one of ordinary skill in the art at the time of invention to use carbon dioxide as a working fluid in the apparatus of Shin as taught by Itoh et al. since carbon dioxide is more environmentally friendly than traditional refrigerants such as Freon.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 4,592,703 to Inaba et al. and U.S Patent 4,755,114 to Shibayashi et al. both disclose wave suppressing members that take different forms.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA L. MYERS whose telephone number is (571)270-5059. The examiner can normally be reached on Monday through Friday, 8:30am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
Unit 3746

/JLM